

IN THE CLAIMS

This listing of claims replaces all prior listings and versions of the claims in the present application.

Listing of Claims:

Claim 1 (Currently Amended): A fine channel device comprising:

a fine channel provided with at least two inlet ports for feeding fluid, inlet channels communicated with the inlet ports, a confluent portion communicated with the inlet channels, a branch portion communicated with the fine channel, from which at least two outlet channels are branched to feed predetermined amounts of fluid, and outlet ports communicated with the outlet channels,

wherein the fine channel is provided with a plurality of partition walls arranged along a boundary formed by at least two kinds of fluid fed from the inlet ports so as not to cause mutual contamination of fluid,

wherein each partition wall of the plurality of partition walls has an upper edge that is elongated and extends along a line parallel to a fluid flow path within the fine channel,

wherein the plurality of partition walls are spaced apart at intervals in a flowing direction of fluid by a distance that is greater than an elongated length of each partition wall, and

wherein intervals between the partition walls are present along the entire length of the fine channel except in the vicinity of the confluent portion and the vicinity of the branch portion of the fine channel, and wherein the partition walls include continuous partition walls which are positioned in the vicinity of the confluent portion and in the vicinity of the branch portion of the fine channel and are connected to said confluent portion and to said branch portion.

Claim 2 (Previously Presented): The fine channel device according to claim 1, wherein in the plurality of partition walls, the partition wall located closest to the confluent portion of the fine channel is connected to the confluent portion, and wherein intervals between adjacent partition walls in the vicinity of the inlet channels are smaller than intervals between adjacent partition walls in a central portion of the fine channel.

Claim 3 (Previously Presented): The fine channel device according to claim 1, wherein the height of partition walls is substantially the same as the depth of the fine channel.

Claim 4 (Previously Presented): The fine channel device according to claim 1, wherein partition walls are provided at positions apart from the confluent portion and the branch portion.

Claim 5 (Previously Presented): The fine channel device according to claim 1, wherein in the plurality of partition walls, the partition wall located closest to the branch portion of the fine channel is connected to the branch portion, and wherein intervals between adjacent partition walls in the vicinity of the outlet channels are smaller than intervals between adjacent partition walls in a central portion of the fine channel.

Claims 6-7 (Canceled).

Claim 8 (Previously Presented): The fine channel device according to claim 1, wherein a portion of the fine channel has a shape other than a straight shape, and said portion includes a wall arranged along the boundary that extends from the vicinity of a portion

originating a non-straight portion of fine channel to the vicinity of a portion ending the non-straight portion of fine channel.

Claim 9 (Canceled).

Claim 10 (Previously Presented): The fine channel device according to claim 1, wherein in the vicinity of the inlet channels and/or the outlet channels of the fine channel, at least two partition walls are connected continuously in a flowing direction of fluid.

Claim 11 (Previously Presented): The fine channel device according to claim 1, wherein a plurality of projections are formed at the inner wall of the fine channel partitioned by partition walls to such an extent capable of maintaining a flow of fluid.

Claim 12 (Previously Presented): The fine channel device according to claim 1, wherein said at least two inlet ports for feeding fluid, the inlet channels communicated with the inlet ports, said at least two outlet channels and outlet ports communicated with the outlet channels are arranged so that the flowing direction of either one of at least two kinds of fluid fed in the fine channel is opposite to the flowing direction of the other of said at least two kinds of fluid fed adjacently in the fine channel.

Claim 13 (Previously Presented): The fine channel device according to claim 1, wherein the inner wall at one side of the fine channel partitioned by partition walls has hydrophilic/hydrophobic properties.

Claim 14 (Previously Presented): The fine channel device according to claim 13, wherein the inner wall of made of a material that is configured to have hydrophilic properties that are different from hydrophilic properties of a fluid to be fed into the fine channel.

Claim 15 (Previously Presented): The fine channel device according to claim 1, wherein a film having fine pores a diameter of which is smaller than any distance between adjacent partition walls is provided between adjacent partition walls in a flowing direction of fluid.

Claim 16 (Original): The fine channel device according to claim 15, wherein the film is made of a polymeric material and/or an inorganic material.

Claim 17 (Previously Presented): The fine channel device according to claim 1, wherein a metallic film is disposed in the entire or a part of the inner surface of the fine channel and/or the wall surface of the partition walls.

Claim 18 (Original): The fine channel device according to claim 17, which further comprises a current supply means and/or a voltage supply means for the metallic film.

Claim 19 (Previously Presented): The fine channel device according to claim 1, which further comprises a circulating channel to feed fluid discharged from an outlet port to an inlet port.

Claim 20 (Original): The fine channel device according to claim 19, which further comprises a reservoir tank communicated with the circulating channel and a pump in order to store the supplied fluid temporally.

Claim 21 (Previously Presented): The fine channel device according to claim 1, which further comprises means for supplying energy to fluid flowing the fine channel.

Claim 22 (Original): The fine channel device according to claim 21, wherein said means for supplying energy to fluid is a heating device and/or a light irradiation device.

Claim 23 (Previously Presented): A fine channel device comprising a plurality of fine channels each as described in any one of claims 1 to 5, 8, and 10 to 17 formed two-dimensionally or three dimensionally.

Claim 24 (Currently Amended): A fine channel device comprising;
a fine channel provided with at least two inlet ports for feeding fluid, inlet channels communicated with the inlet ports, a confluent portion communicated with the inlet channels, a branch portion communicated with the fine channel, from which at least two outlet channels are branched to feed predetermined amounts of fluid, and outlet ports communicated with the outlet channels,

wherein the fine channel is provided with a plurality of partition walls, each having a height substantially the same as the depth of the fine channel, arranged along a boundary formed by at least two kinds of fluid fed from the inlet ports so as not to cause mutual contamination of fluid,

wherein each partition wall of the plurality of partition walls has an upper edge that is elongated and extends along a line parallel to a fluid flow path within the fine channel,

wherein the plurality of partition walls are spaced apart by a distance that is greater than an elongated length of each partition wall, and

wherein intervals between the partition walls are present along the entire length of the fine channel except in the vicinity of the confluent portion and the vicinity of the branch portion of the fine channel, and wherein the partition walls include continuous partition walls which are positioned in the vicinity of the confluent portion and in the vicinity of the branch portion of the fine channel and are connected to said confluent portion and to said branch portion.

Claims 25-34 (Canceled).